

## Remarks

### I. Status of claims

Claims 18, 19, and 21-33 were pending.

Dependent claims 34-37 have been added.

Claim 24 has been rewritten in independent form in response to the Examiner's indication that such a claim would be allowable. Claim 25 incorporates the features of independent claim 24 and therefore is patentable for at least the same reasons.

The Examiner has indicated that claim 28 would be allowable if rewritten in independent form. Claim 28 has been written as an independent claim, but it differs from the claim that would result from an exact rewriting of claim 28 in independent form.

### II. Claim rejections under 35 U.S.C. § 102

The Examiner has rejected claims 19, 22, 23, 26, and 27 under 35 U.S.C. § 102(b) over Werner (U.S. 5,678,861).

Claim 19 has been amended and now recites:

19. A machine-implemented method of binding sheets into bound text bodies having respective spines exposed for adhesive application and characterized by multiple length dimensions and multiple thickness dimensions, the method comprising:

assembling from multiple sheets a text body having a spine characterized by a length dimension and a thickness dimension; and

dispensing across the thickness dimension of the spine of the assembled text body multiple segments of solid sheet adhesive, wherein the dispensed segments of solid sheet adhesive extend along the length dimension of the spine of the assembled text body with a total effective width corresponding substantially to the length dimension of the spine of the assembled text body.

The sheet binding method described in Werner is not machine-implemented; instead, it is designed to be implemented by hand (see, e.g., Abstract and FIGS. 5 and 6). For at least

this reason, the Examiner's rejection of independent claim 19 under 35 U.S.C. § 102(b) over Werner now should be withdrawn.

In addition, in accordance with Werner's teaching, the strip-like spine member 17 is not dispensed across the thickness dimension of the spine of the assembled articles 15. To the contrary, the strip-like spine member 17 first is dispensed from a dispenser 61 (shown in FIG. 10) and subsequently the strip-like spine member 17 is applied to the set of articles 15. For at least this additional reason, the Examiner's rejection of independent claim 19 under 35 U.S.C. § 102(b) over Werner now should be withdrawn.

Claims 22, 23, 26, and 27 incorporate the features of claim 19 and therefore are patentable over Werner for at least the same reasons.

## II. Claim rejections under 35 U.S.C. § 103

### A. Claims 18 and 29-33

The Examiner has rejected claims 18 and 29-33 under 35 U.S.C. § 103(a) over Hocking (U.S. 6,726,423) in view of Voges (U.S. 4,531,873) and McLane (U.S. 3,296,911).

Claim 18 recites the following machine-implemented steps:

assembling from multiple sheets a text body having a spine characterized by a length dimension and a thickness dimension;  
dispensing a solid sheet adhesive across the thickness dimension of the spine of the assembled text body;  
as the solid sheet adhesive is being dispensed, cutting the solid sheet adhesive to an effective width substantially corresponding to the length dimension of the spine of the assembled text body;  
and  
cutting the dispensed solid sheet adhesive to an effective length at least as long as the thickness dimension of the spine of the assembled text body

The Examiner has acknowledged that "Hocking does not disclose a method which includes cutting the solid sheet adhesive to an effective width substantially corresponding to the length dimension of the spine of the assembled text body as the solid sheet adhesive is being dispensed." In spite of this failing of Hocking's disclosure, the Examiner has stated that:

Even though Hocking discloses that the roll of the solid sheet adhesive is selected to be the width of the pages to be bound together to avoid the need for trimming along the width dimension, when manufacturing books having a plurality of dimensions, it would have been readily apparent to one of ordinary skill in the art at the time of the invention that changing the adhesive sheet roll for each differently sized text body would be inconvenient and time consuming.

The Examiner's proposed modification of Hocking, however, is directly contradicted by Hocking's express teaching that "Roll 12 is selected to be the width of the pages to be bound together avoiding the need to be cut or trimmed along the width dimension" (col. 2, lines 32-35). Indeed, contrary to the Examiner's statement, one of ordinary skill in the art at the time the invention was made would have been led by Hocking's disclosure to select a roll of adhesive having a width matching the width of the pages to be bound. Moreover, Hocking fails to even hint at the claimed step of cutting a solid sheet adhesive to an effective width substantially corresponding to the length dimension of the spine of the assembled text body as the solid sheet adhesive is being dispensed.

In an attempt to make-up for the failure of Hocking's disclosure, the Examiner has indicated that:

Voges discloses a method of binding sheets into text bodies which includes cutting a solid sheet adhesive to an effective width substantially corresponding to the length dimension of the spine of the assembled text body (column 6, lines 54-61). McLane discloses a web handling method which includes dispensing a solid sheet material and cutting the solid sheet material to a customized width dimension as the solid sheet material is being dispensed (column 3, lines 28-32). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Hocking to include width adjustability for cutting the solid sheet adhesive as suggested by Voges and McLane to provide adhesive sheet segments which are customized to correspond to the length of the spine of the assembled text body.

Voges discloses an apparatus for feeding a cut portion of an adhesive strip to a device for sticking to the back of a book block. In accordance with Voges' teaching, an adhesive strip 4 having a fixed width is advanced past a severing blade 10, which cuts the adhesive strip 4 to have length corresponding to the width of a book block 45. The leading edge of the cut adhesive strip 4 then is moved until it bears against a limit means 8, which defines one

end of a deposit means 9. The book block 45 is manually brought down into contact with the cut adhesive strip 4 in the deposit means 9 (see, e.g., col. 7, lines 31-21). Thus, in accordance with Voges' approach, the adhesive strip 4 is dispensed and then cut, and subsequently a user manually brings the book block 45 down into contact with the cut adhesive strip 4.

Therefore, Voges, like Hocking, does not teach or suggest cutting a solid sheet adhesive to an effective width substantially corresponding to the length dimension of the spine of the assembled text body as the solid sheet adhesive is being dispensed, as recited in claim 18.

Contrary to the Examiner's assertion, McLane does not provide any teaching that would have led one of ordinary skill in the art at the time the invention was made to attempt to use his insulating material severing apparatus in Hocking's sheet binding apparatus to cut a solid sheet adhesive to an effective width substantially corresponding to the length dimension of the spine of the assembled text body as the solid sheet adhesive is being dispensed, as recited in claim 18. Under customary usage conditions, McLane's severing apparatus would be used to cut "a continuous web of wound insulating material into panels or portions of preselected dimensions" (col. 2, lines 18-19), and these panels then would be collected and used for insulating and duct applications. Thus, one of ordinary skill in the art at the time the invention would not have been led to cut a continuous web of insulating material to an effective width as the insulating material was being dispensed across the thickness dimension of an object to which the insulating material would be applied.

In addition, McLane is non-analogous art and therefore cannot support a proper *prima facie* case of obviousness. McLane does not teach or suggest anything about a method of binding sheets into bound text bodies, much less anything about a bookbinding method that includes the assembling, the dispensing, and the cutting steps recited in claim 18. McLane's severing apparatus relates to cutting materials, such as a continuous web of wound insulating material, duct wrapping, and binding material for enclosing the duct channels within an insulating cover (see, e.g., col. 2, lines 6-20). The field of cutting insulating, duct wrapping, and duct channel binding materials clearly is not the same as the field of binding sheets into bound text bodies. In addition, the field of cutting insulating material is not reasonably pertinent to the problem of binding sheets into bound text bodies with a method that includes dispensing solid sheet adhesive across the thickness dimension of a text body spine, which is the subject of the invention recited in claim 19. Indeed, solid sheet adhesive for binding text bodies is not used in the field of insulating, duct wrapping, and duct channel binding

materials. Accordingly, a person of ordinary skill, seeking to solve a problem of binding sheets into bound text bodies with solid sheet adhesive, would not reasonably be expected or motivated to look to apparatus and methods for severing insulating, duct wrapping, and duct channel binding materials, as taught by McLane.

For the reasons explained above, the Examiner has failed to provide the requisite factual basis and failed to establish the requisite motivation to support her deemed conclusion that the features recited in claim 18 would have been obvious to one of ordinary skill in the art at the time the invention was made. None of the cited references teaches or suggests anything that would have led one of ordinary skill in the art at the time the invention was made to cut a solid sheet adhesive to an effective width substantially corresponding to the length dimension of the spine of the assembled text body as the solid sheet adhesive is being dispensed, as recited in claim 18. It appears that the Examiner improperly has engaged in hindsight reconstruction of the claimed invention, using applicants' disclosure as a blueprint for piecing together elements from non-analogous sources in a manner that reconstructs the invention recited in claim 18 only with the benefit of hindsight. Without a proper explanation for combining the cited prior art to arrive at the invention recited in claim 18, the Examiner has failed to establish a proper *prima facie* case of obviousness and the rejection of claim 18 should be withdrawn.

For at least these reasons, the Examiner's rejection of independent claim 18 under 35 U.S.C. § 103(a) over Hocking in view of Voges and McLane now should be withdrawn.

Claims 29-33 incorporate the features of independent claim 18 and therefore are patentable over Hocking, Voges, and McLane for at least the same reasons explained above. Claims 29 and 30 also are patentable over the cited references for the following additional reasons.

Claim 29 recites "further comprising advancing the solid sheet adhesive beyond a cut location and cutting excess solid sheet adhesive to prepare a clean leading edge free of any previous cuts for a subsequent sheet binding." The Examiner has asserted that Hocking teaches this feature at col. 2, lines 30-50. Contrary to the Examiner's assertion, however, Hocking does not teach or suggest anything about advancing the solid sheet adhesive beyond a cut location and cutting excess solid sheet adhesive to prepare a clean leading edge free of any previous cuts for a subsequent sheet binding. The pertinent part of the cited section of Hocking merely teaches that the cutter 20 "is positioned to sever a precise length from the

binding material roll 12 necessary to wrap around the book spine 27, the length of the cut strip being dependent on the number and thickness of sheets presented into the binding cavity 25 for binding.”

Claim 30 recites “further comprising storing the excess solid sheet adhesive cut from the solid sheet adhesive.” The Examiner has asserted that this feature is shown by the roll 12 in FIG. 1 of Hocking. FIG. 1 merely shows that the roll 12 of binding material is mounted on a spindle 13. FIG. 1 does not show the storage of any excess binding material that was cut from the roll 12.

B. Claims 19, 21-23, 26, and 27

The Examiner has rejected claims 19, 21-23, 26, and 27 under 35 U.S.C. § 103(a) over Werner in view of Voges (U.S. 4,531,873).

With regard to independent claim 19, the Examiner simply has asserted that Werner discloses the features previously recited in the claim before the current amendment. The Examiner's rejection of claim 19 under 35 U.S.C. § 103(a) appears to be identical to her rejection of claim 19 under 35 U.S.C. § 102(b) (discussed above). Claim 19 is patentable over Werner for the same reasons explained above. Voges does not make-up for the failure of Werner to teach or suggest the features discussed above. Indeed, in accordance with Voges method, the book block 45 is applied manually to the cut adhesive strip 4. In addition, the adhesive strip 4 is dispensed before the book block 45 is applied manually to the cut adhesive strip 4; that is, the adhesive strip 4 is not dispensed across the thickness dimension of the book block 45

For these reasons, the Examiner's rejection of independent claim 19 under 35 U.S.C. § 103(a) over Werner in view of Voges now should be withdrawn.

Claims 21-23, 26, and 27 incorporate the features of independent claim 19 and therefore are patentable over Werner and Voges for at least the same reasons. These claims also are patentable over Werner and Voges for the following additional reasons.

Claim 21 now recites that the dispensing comprises dispensing across the thickness dimension of the assembled text body spine multiple segments of solid sheet adhesive having different widths. The Examiner has acknowledged that “Werner does not disclose a method

where the dispensed multiple segments of solid sheet adhesive have different widths.”

Nevertheless, the Examiner has stated that:

It is well known and conventional in the sheet material dispensing art, as disclosed by Voges (column 6, lines 56-61), to cut a sheet material segment to the exact size needed for application to an article. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Werner to include cutting a segment of the solid sheet adhesive as suggested by Voges to provide an adhesive sheet having the exact dimension of the text body. It is noted that this cutting process would result in a method in which the dispensed multiple segments of solid sheet adhesive have different widths.

The Examiner appears to have misread claim 21. In any event, as amended, claim 21 clearly recites that multiple segments of solid sheet adhesive having different widths are dispensed across the thickness dimension of the assembled text body spine. Neither Werner nor Voges teaches dispensing adhesive across the thickness dimension of the assembled text body spine. In addition, neither of these references teaches dispensing multiple segments of solid sheet adhesive across the thickness dimension of the assembled text body spine; indeed, only a single strip of adhesive is used to bind sheets in accordance with the binding methods described in Werner and Voges.

Claim 22 now recites that the dispensing comprises dispensing across the thickness dimension of the assembled text body spine multiple segments of solid sheet adhesive having equal widths. Claim 22 is patentable over Werner and Voges for essentially the same reasons explained above in connection with claim 21. The Examiner has asserted that FIG. 7 of Werner discloses the features of claim 22. FIG. 7, however, merely shows the heater 40 being used to press a portion of the binding strip 29 against the block of sheets 36. FIG. 7 does not show multiple segments of solid sheet adhesive having equal widths being dispensed across the thickness dimension of the assembled text body spine.

Claim 23 now recites that at least one of the solid sheet adhesive segments is dispensed across the thickness dimension of the assembled text body spine independently of the other ones of the solid sheet adhesive segments. Claim 23 is patentable over Werner and Voges for essentially the same reasons explained above in connection with claim 21. The Examiner has asserted that FIG. 5 of Werner discloses the features of claim 23. FIG. 5, however, merely shows the block of sheets 36 being moved into position over the spine

heater 40. FIG. 5 does not show at least one of the solid sheet adhesive segments being dispensed across the thickness dimension of the assembled text body spine independently of the other ones of the solid sheet adhesive segments.

Claim 26 recites that the multiple segments of solid sheet adhesive are dispensed along the length dimension of the text body spine simultaneously. As explained above, neither Werner nor Voges teaches dispensing adhesive across the thickness dimension of the assembled text body spine, nor do either of these references teach dispensing multiple segments of solid sheet adhesive across the thickness dimension of the assembled text body spine. The Examiner has asserted that FIG. 4 of Werner discloses the features of claim 26. FIG. 4, however, merely shows the spine heater 40 applying heat and pressure to secure the binding sheet portion 27 to the front cover 15.

Claim 27 recites that the multiple segments of solid sheet adhesive are dispensed along the length dimension of the text body spine sequentially. As explained above, neither Werner nor Voges teaches dispensing adhesive across the thickness dimension of the assembled text body spine, nor do either of these references teach dispensing multiple segments of solid sheet adhesive across the thickness dimension of the assembled text body spine. The Examiner has asserted that FIG. 5 of Werner discloses the features of claim 27. FIG. 5, however, merely shows the block of sheets 36 being moved into position over the spine heater 40.

#### IV. Conclusion

For the reasons explained above, all of the pending claims are now in condition for allowance and should be allowed.

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Applicant : John P. Ertel et al.  
Serial No. : 10/693,447  
Filed : Oct. 24, 2003  
Page : 14 of 14

Attorney's Docket No.: 10007145-5  
Amendment dated September 9, 2005  
Reply to Office action dated June 10, 2005

Respectfully submitted,

Date: September 9, 2005



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